# *Frequency Asked Questions*
# *Flood Events*

**What causes flooding in the Mississippi River drainage basin?**

The Mississippi River has the third largest drainage basin in the world. It drains 41% of the 48 contiguous states of the United States and covers more than 1,245,000 square miles, including all or part of 31 states. If large amounts of rain fall over an extended period of time within this great drainage basin, a flood may occur. Such floods extend over long periods of time and affect the Mississippi River, tributary streams, and the surrounding land.

**Why does the Yazoo Backwater Area Flood?**

As waters rise on the Mississippi River, it impedes the natural gravity flow on the Yazoo River, forcing the Yazoo River water to 'back up' into the lower Delta region. This backwater flooding is not a sudden surge of water, but a slow moving flood that can remain above flood stage for several months at a time.

Under normal conditions, the Steele Bayou's structure gates are open, allowing for interior creeks and rivers to drain using gravitational flow. However, if their flow is impeded by higher Mississippi River and Yazoo River water, these channels will flood the region. To keep the floodwaters out, the structure's gates must be closed.

The current system is effective in keeping the region free from high Mississippi River backwater flooding and Yazoo River water, but with the gates closed, interior creeks and rivers have no exit. The result is interior flooding for residents until the gates can be reopened.

**During a flood event, what does the U.S. Army Corps of Engineers do?**

The Corps works with federal and state agencies, as well as local communities, to manage the storm runoff and mitigate damage as much as possible. It also provides technical assistance before, during and after flood events. This assistance can range from how to place sandbags to helping design a permanent flood control structure. The Vicksburg District's mission is to provide timely and effective flood emergency assistance. Our assistance during a flood event is intended to meet the immediate threat to life or property.

**What a Phase I and Phase II Flood Fight mean?**

Phase I means that the river has reached bank full and rising based on the National Weather Service Forecast. Under Phase I, the Corps' proactive measures support the efforts of the local levee districts by mobilizing monitoring teams. The teams are on the ground performing levee inspections and surveillance operations. It also means we have activated our emergency management center and continue coordination with our Local, State and Levee Board partners.

Phase II Flood Fight is a higher level operation. During Phase II of the flood fight, the Corps works closely with local levee districts to increase monitoring and surveillance. The Corps will provide flood fighting supplies and technical assistance, as well as work with the levee district to address any impacts to the system. Corps also monitors river stages and flows to determine whether to operate any of the flood control structures. Prior to the operation of a flood control structure, the Corps notifies its local, state and federal partners if there is a need to operate any of the structures.

**How will you be able to tell that a levee is about to fail? What are the symptoms?**

If the water runs over the top of the levee for a prolonged period of time, which is called overtopping, the levee is more likely to fail. Other symptoms indicative of levee failure include uncontrolled seepage, seepage that carries material from inside the levee or movement of the slope.

**What does it mean when a levee breaches?**

A levee breaches when an opening in the levee occurs and the river comes through the levee structure.

**What happens if a levee overtops?**

If a levee overtops for a short duration and the water goes down, the levee may stay intact. For longer overtopping events, or if the overtopping occurs in particular place, the levee may fail.

**What is a sand "boil"?**

Sand Boils are created by water passing under the earthen barrier (levee) and appearing on the other side like a muddy spring. The muddy appearance means that the water is carrying soil. If left unchecked, sand boils can eventually undermine the levee. The goal of any sand boil remedy is to prevent soil from being carried with the water. A typical remedy is to surround the sand boil with sand bags high enough to reduce the pressure of the water so no soil is being carried and the water flow is clear. The Corps also uses relief wells.

**What if the levee fails – is there a back-up?**

There is not a physical back-up if a levee fails. As a precaution, all communities activate a safety plan, which can include evacuations, when a high-water event is expected. The owners of the levees are responsible for developing and executing those plans, and the Corps will work closely with them to provide technical assistance.

**How do levees work?**

Levees are earthen structures with largely impermeable clay-like cores that are built between the land and a body of water. They are specially designed to allow rivers to rise, while preventing water from flowing onto the land side of the levee. During a high water event, they are designed to collect storm water at their base on the land side and pump it to the water side.

**Do levees have steel walls underneath them?**

No, levees are not constructed using steel. Typical levees are made with earthen fill and material.

**Are rocks stronger than earth?**

Yes, but rocks are only used in areas where high water velocity and activity are likely to pose a threat or danger to a community. Generally, earthen levees provide enough protection to prevent their surrounding communities from flooding.

**If your project is designed to protect us from a 100-year flood, what does that mean?**

A project built to protect against a 100-year flood event means that it protects against a flood that has a one in one-hundred chance of happening in any given year.

**What types of flood damage reduction projects are there?**

Flood damage reduction projects range from constructing a dam to building a levee or erecting a floodwall. In addition to these projects, the Corps can provide other measures that help reduce damage from a flood, such as flood proofing and flood warning systems. An example of flood proofing is filling in a basement or raising a structure off the ground using piles.

**Who inspects the levees and how often?**

Engineers from the Vicksburg District evaluate the levees each year. The team is led by a licensed professional engineer with experience in the design, construction and operation of a levee. The final inspection report undergoes an independent technical review, in which additional professional engineers review and approve the report. Levee owners are encouraged to participate in the inspection process.

**At what point during a flood event does the U.S. Army Corps of Engineers order an evacuation?**

The Corps does not have the authority to order an evacuation. The Corps provides information and updates to the local authorities so they can make those determinations. This information can include when a community can expect flood waters to exceed the project's level of protection and what fixes or repairs a town may take to help the project perform better during a high water event.

**What can citizens do to stay up to date on the current situation?**

Citizens should monitor media for weather predictions. If they feel threatened or have specific questions about their property or flood fighting measures, they should contact their county emergency preparedness office for help.

**Will the U.S. Army Corps of Engineers provide sandbags to private citizens?**

The Corps is only authorized to provide sandbags and pumps to public agencies to protect public infrastructure, such as roads, bridges, hospitals, etc. Private citizens should contact their local levee district and emergency management offices for assistance in getting these materials.

**Where do individuals go for help after being flooded?**

Local governments establish points of contact in their emergency management agencies to provide individuals with assistance before, during and after a flood event.

**What type of assistance does the Vicksburg District provide?**

If a flood damage reduction project sustains damage during a flooding event, the project may be eligible for federal funding to repair it, at the request of the local project owner. Teams from the Corps will inspect these projects and submit each inspection to higher headquarters for approval and funding**.**

**Our community is prone to flooding. What are the steps we need to take to get a flood damage reduction project?**

Concerned residents who want to build a project to reduce damages from flooding should contact their local government to seek assistance.

**Can the Corps remove debris from my property?**

Unless specifically mandated by the Federal Emergency Management Agency as a disaster response, the Corps does not have the authority to remove debris from individual private properties.

**Can the Corps unclog the stream behind my house?**

Unless specifically mandated by the Federal Emergency Management Agency as a disaster response, the Corps does not have the authority to unclog streams on individual private properties**.**